

Zero Emission Vehicles Ireland (ZEVl), Part II

Local EV Charging Network Challenges

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Introduction

This is the second of a two-part Briefing on the implementation of a National Electric Vehicle (EV) Charging Infrastructure Network. Part I of the Briefing concerned EV infrastructure on the TEN-T and national road and motorway network that carries 43% of all traffic and dealt with the Draft National En-Route EV Charging Network Plan 2023-2030 (Draft Plan), which was published in September '23. Part II is focused on the provision of EV charging points at local level. One of the more discerning differences of this Briefing is the lead role assigned to the Local Government sector regarding the implementation of national Government EV charging policy.

Established as the Zero Emission Vehicles Ireland (ZEVl) office within the Department of Transport (DoT) by the Government in January '22, ZEVl subsequently formulated an EV Charging Infrastructure Strategy 2022 – 2025 (EV Strategy) that was launched by Minister Eamon Ryan in January '23. Informed by the National Climate Action Plan 2023 (CAP 23), the strategy seeks to support consumers, public sector, and businesses to continue making the switch to zero-emission vehicles.

CAP 23 set an ambitious target of switching 845,000¹ or 30% of the national fleet to electric vehicles by 2030, and the strategy for achieving the target is focussed along two main themes. As outlined above, this Briefing is concerned with the second theme which is the development of a local infrastructure charging network.

In addition to CAP 23 and the EV Strategy, development of this portion of the network is informed by ZEVl's guidance document, *Guidelines for Local Authorities on procurement of a consultant to develop their Local Authority EV Infrastructure Strategy*, issued to Councils in July '23. While this Briefing examines ZEVl's Draft Plan in respect of gaps in the local charging network and will be of interest to Local Government senior management teams, it will also be of interest to senior policy makers across government, the Department of Transport (DoT), ESB Networks, and Eirgrid, all of whom are engaged and have differing levels of responsibility for the conversion of the national fleet to electric vehicles.

¹ CAP 23, Chapter 15, Transportation, Table 15.6 – Key Metrics to Deliver Abatement in the Transport Sector

Context.

Multiple national state agencies fulfil a facilitation role re the rollout of the National En-route network by the private sector (see Part I of the Briefing). Rollout of the local charging network however will require a greater pro-active role of each Local Authority in terms of planning, co-ordination, and facilitation. It will require collaboration of local as well as national stakeholders, and consideration and integration of local policies and plans such as Parking Bye-laws, Tourism Policies, Sustainable Mobility, Urban and Rural Regeneration Fund projects (URDF & RRDF), and Active Travel Plans. The private sector will continue to play a major role and will also be subject to planning conditions requiring the provision of EV charging points at certain locations.

Other issues that are particular to the Local Government sector are the need for local policies to be approved by local Council Members and the consistency and speed of adoption and implementation of those policies across the sector. Some Councils have already taken the initiative and are moving ahead in a pro-active manner, but these tend to be Councils with greater resources such as the four Dublin Authorities who have combined to formulate the [Dublin Local Authority Electric Vehicle Charging Strategy](#), and who produced their Final Report in June 2022. This evidence-based strategy has also informed the ZEV EV Strategy.

Local EV Charging Strategy & Principles

ZEVI has detailed five main principles for the development of the local EV charging network as depicted in Figure 1 below:



Figure 1. Local EV Charging Network Principles

Application of the EV Strategy and above principles are aimed at ensuring equity, just transition, and alignment with national and local policies. It aims to achieve the Alternative Fuel Industry Regulation (AFIR) and other stringent targets not being delivered by the private sector, meet the immediate and growing EV charging infrastructure demand, and set governance and regulatory standards for the network.

The various public and private charging options are depicted in Figure 2 below. What Local Authorities are being asked to do is develop strategies for the provision of neighbourhood and residential charging for those without off-street charging capabilities, destination charging, and En-route infrastructure charging in line with the national En-route charging plan in collaboration with Transport Infrastructure Ireland (TII).



Figure 2. EV Public and Private Charging Options.

ZEVI estimates circa 80% of private EV charging is done at home, but as the transition to EVs accelerates, neighbourhood and residential charging will be required for those for whom home charging is not an option. Destination charging applies to retail outlets, hotels, holiday/tourist destinations, working hubs, public carparks, church carparks, sports facilities etc., and is intended to meet the needs for top-up charging where required.

A central government role is being advanced by ZEVI for rolling out the residential/neighbourhood and destination charging infrastructure whereby it will liaise with each Local Authority regarding a three-step implementation process. Depicted in Figure 3, the process and ZEVI support involves:

1. Development of EV charging infrastructure strategies.
2. Preparation of business/implementation plan and funding application.
3. Commencement of delivery and roll-out of charging infrastructure.

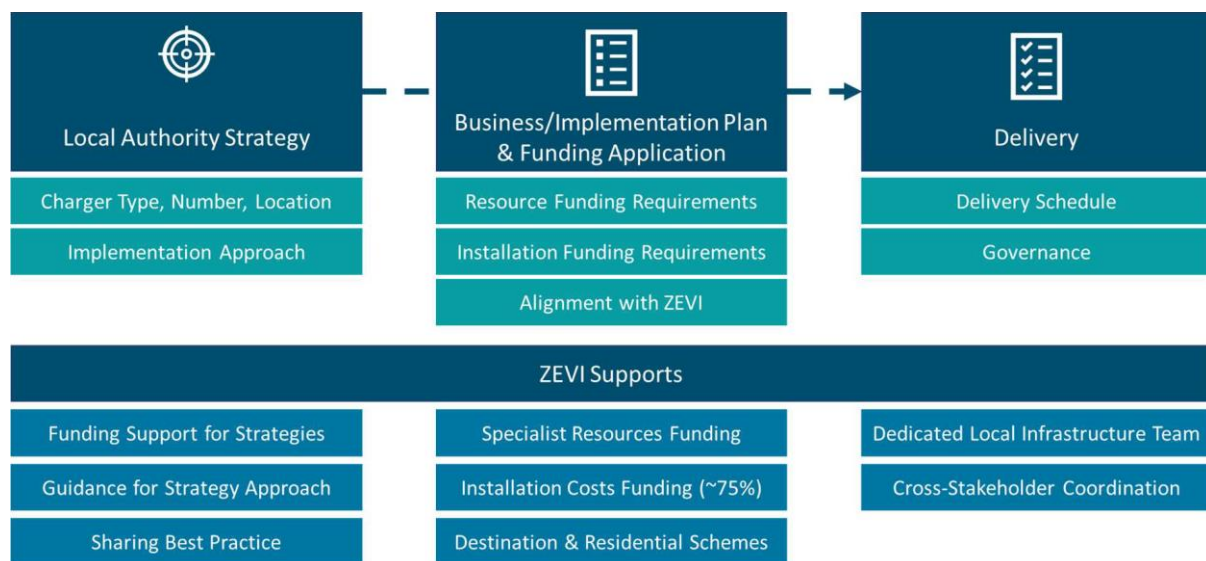


Figure 3. Residential/Neighbourhood and Destination EV Charging Implementation Process

Local Authority EV Strategy

Local Authorities are required to formulate Local EV Strategies by the end of 2023 informed by the requirements of the ZEVI guidance document and Dublin Local Authorities strategy. Aligning with national and local policies and plans, the local implementation strategies are required to be evidence based and to identify and consider:

- High level targets for Local Authorities based on the National targets set out by Alternative Fuel Industry Regulations, Local Authority population, and predicted EV uptake to 2025 and 2030.
- Travel distances between towns and villages along local and national routes and optimum locations for Enroute charge points.
- Seasonality of need in particular tourist areas.
- The number of dwellings without availability for on street parking or charging.
- Opportunities for Innovation on sites.
- Opportunities for Scalability of sites.

Funding support of €40,000 per Local Authority and €100,000 for two or more Authorities working together, is being provided for the procurement of consultancy services to produce the EV strategies. On completion, they will be input into a National EV Charging Network Plan to form the basis for the preparation of business plans by the Local Authority and funding requests to ZEVI for the implementation of the strategy.

Local Authorities are required to consider providing chargers initially to areas with no EV charging facility, followed by a transition to a demand driven approach where residents apply to the Local Authority for an EV charger. To be successful, applications will be required to demonstrate an absence of an EV charger within a minimum of 300m of the property and, a lack of a facility to install a home charger. Existing and future demand for EVs and significant modelling and analysis will be required, as will alignment with other Local Authority projects such as Active Travel Plans, URDF, or Social Housing developments.

With regard to business models, Local Authorities are advised to address key questions with the objective of identifying and evaluating potential business models and scenarios for consideration in roll-out and operation of neighbourhood and destination charging. Key questions and outputs include details of the predominant EV charging business models internationally, current models in place in Ireland and Europe, any existing models in place within Local Authorities, who the Charge Point Operators (CPOs) are in the market, financial implications of each business model, and the pros/cons and risks associated with the different models.

Supports for the Local Authority EV Strategies, other than financial, are available from the ZEVI office. They take the form of overviews of modelling assumptions to assist with modelling, details of data sets that can be used to address the key questions, workshops to discuss and assess the modelling assumption methodologies and risks/challenges, and details of the existing models in place in Ireland and internationally.

Responsibility for the planning and delivery of the local EV infrastructure lies with each Local Authority with national coordination support being provided by ZEVI. As with the rollout of the Enroute process detailed in Part 1, coordination with multiple national stakeholders will be required giving rise to a need for ongoing communication and consultation.

Discussion and Comment.

Part I of this Briefing discussed the challenges arising for the national En-route charging network. Some of the issues such as ESB network constraints and capacity issues are equally relevant for local and destination charging, but not repeated in this Briefing. The focus is instead on issues, some of which may not be immediately apparent, that are of national significance but arise at the local level.

Is the ZEV1 EV strategy overly centralised? Is it likely to achieve its objectives? Is the bureaucratic process for private sector investors too cumbersome? Can the private sector have confidence in the ability of the public sector to remove system blockages and facilitate development of the infrastructure? Is the EV charging expertise and knowledge gained by the Dublin Authorities transferrable to other Local Authorities? Perhaps it is too early in the process to know the answers to these and other questions, but any delay caused by the issues will make it very difficult to meet the existing stringent targets.

National policy initiatives have implications for the Local Government sector as they require implementation at the local level. In this regard, the Department of Transport is one of the more proactive of the Government Departments in rolling out climate related policies as evidenced by the recent requirement to adopt local Sustainable Mobility plans in addition to the current requirement for EV Strategies. A recent announcement by Minister Eamon Ryan for the development of 200 mobility hubs to be used for car and bike sharing schemes and for electric vehicle charging reinforces the point. According to the latest Ministerial announcement, development of the hubs is being backed by €40m from the Government's Climate Fund and, as with the local EV Strategies, is to be led by Local Authorities. A business case is being prepared presently and pilot projects are to be rolled out in three cities. The initial pilot is being led by Fingal County Council in Blanchardstown.

As other Departments get up to speed with the climate agenda, the CCMA and Local Government sector can expect increasing obligations, demands, requirements, and involvement with the accelerating agenda.

Successful implementation of new national policies inevitably requires close oversight, appropriate checks and balances, and good corporate governance. Such is the case with the implementation of the ZEV1 EV strategy, particularly as considerable collaboration and cooperation of multiple statutory agencies and investment by the private sector is required. Yet the question arises as to whether the balance between central and local control, checks and balances, and the level of bureaucracy is

appropriate, and whether they will act as a disincentive to the private sector on whom there is such a reliance for delivery of the infrastructure and implementation of the policy.

At this point it's too early in the implementation stage to determine whether the correct balance has been achieved, but questions do arise as to some of the requirements. Local Authorities are required to procure consultancy services and formulate and adopt strategies that will be input into a National EV Charging Network Plan. In turn, the strategies will form the basis for the preparation of business plans by the Local Authority and funding requests to ZEVl for the implementation of the strategy. This appears to be a somewhat circular process that may delay implementation.

In the preparation of Business Plans, each Local Authority is required to undertake detailed analysis and assessment of pre-dominant international EV charging business models, current business models in Ireland, models in Europe that could be used in Ireland, business models for Charge Point Operators in the market, financial implications for each of the business models, and the best business models to meet the 2025 and 2030 target deadlines, among others. ZEVl will provide support and data to Local Authorities regarding the data and analysis. Notwithstanding the ZEVl support, perhaps it would be more efficient and effective for this analysis to be prepared centrally rather than by each of the 31 Local Authorities who will each expend scarce resources on overlapping analysis.

Reference is made in the guidance document to Local Authority URDF, social housing, and active travel plans and projects. These and other local plans and projects are relevant and important and are worthy of consideration by each Local Authority in the context of the EV strategy. Consideration should be given at local level to proofing existing plans and projects for the inclusion of EV charging points where appropriate. URDF, RRDF, public realm, social housing, and recreation and amenity projects can all contribute to the achievement of the EV Strategy objectives.

Pay & Display and Parking Bye-laws should be reviewed in tandem with the formulation of EV Strategies and Business Plans. Some have already been reviewed in the aftermath of Covid-19 to take account of initiatives such as short-term click and collect parking while others are currently being examined in the context of the rollout of sustainable mobility and active travel proposals. Consideration should be given to the balance to be struck between encouraging electric vehicles into urban areas as against public transport, walking and cycling proposals of sustainable mobility policies.

Other issues include the location of EV charging points, whether they should be in more prominent or central places, and whether Pay & Display charges should be applied as well as the electricity charging costs. Where Authorities own and operate all-day surface car parking facilities, they may wish to consider those facilities for EV destination charging points. Then there are the needs of specific groups. Requests for charging points to suit the needs of Taxis can be anticipated, and for those with disabilities and a requirement for wheelchair access, there may be a need to install charging points to a different but appropriate specification. All of these issues will have an impact on local Parking Bye-laws.

Having formulated and adopted the local EV Strategies, procurement and more particularly, green procurement, will emerge as another potential issue to delay implementation and achievement of the 2025 and 2030 targets. ZEVI's EV guidance document is very detailed and prescriptive regarding procurement. As the Local Government sector has significant experience and expertise in all aspects of the procurement process, delays in this aspect are not anticipated.

The Planning process is more unpredictable however and has the capacity to impact on the best laid plans. Intertwined as it is with the local political system, Local Authorities can mitigate potential Planning risks by engagement with and involvement of local political representatives. This can be done through the Strategic Policy Committee and Corporate Policy Group structure prior to bringing proposals to a formal Council meeting for decision. It is envisaged that Local Authorities will make extensive use of the Planning Part 8 process to facilitate the process and the rollout of EV charging infrastructure.

Finally, the Local Government sector has at its disposal the Climate Action Regional Offices (CARO) structure to advise and assist with the wider climate agenda. Acting essentially as centres of excellence, the CAROs have already contributed to the formulation and adoption of the initial Local Authority Climate Action Plans (LACAP) in 2019 and are similarly engaged with the sector on the current LACAP process. One of the benefits of the CARO network is the consistency in local climate action plans that it facilitated. Such consistency can be equally applied to the local EV Charging Strategy process.

Conclusion

Establishment of a dedicated office within a Government Department to advance specific objectives and actions of the National Climate Action Plan 2023 is a welcome initiative likely to be replicated by other Government Departments as they come to terms with their climate obligations and challenges. Whether the ZEVI office achieves the stretched targets set for it remains to be seen and the task is by

no means easy. As an indication of the seriousness with which the DoT is addressing the challenge however, it's a welcome development.

No new policy or initiative is ever perfect on first iteration. All tend to be amended and enhanced as the policies are rolled out, stakeholders become familiar and competent in their administration, externalities are identified, and consequences, both anticipated and unanticipated, emerge. Administration and application of the EV Strategy is likely to follow the same path. If the proactive approach demonstrated to date by DoT follows through, then it is likely the EV strategy will be enhanced to address some of the issues highlighted in this Briefing, and every opportunity will be afforded to the achievement of the stretched EV targets by the due dates.

Yet achievement of the targets is not the preserve of the DoT alone as there is a reliance of multiple agencies of State, including Local Government, and the private sector. All State agencies must operate collaboratively for the private sector to be facilitated in delivering its infrastructure provision role.

The Local Government sector has for its part demonstrated initiative and commitment, particularly through the Dublin Authorities Electric Vehicle Charging Strategy, and has a high level of competence and expertise in areas of procurement, Planning, and knowledge of local requirements. It also has the CARO network available to it to ensure and facilitate consistency in strategy formulation and application across all 31 Local Authorities.

But delivering on its climate commitments on transportation, including the EV strategy, has greater significance for the delivery of the wider climate agenda. Other Government Departments can be expected to require the assistance of Local Government in implementing their respective climate strategies and actions and it is important that Local Government demonstrates the ability to so deliver.

On balance however, there is more reason to be optimistic than pessimistic.